

# Editing Engagement: Visions of Science, Democracy, and Responsibility in Gene Editing Discourse

Editor's note:

Christian Ross defended his dissertation titled "Editing Engagement: Visions of Science, Democracy, and Responsibility in Gene Editing Discourse" in Spring 2021 in front of committee members Ben Hurlbut, Jane Maienschein, James Collins, Michael Crow, and Daniel Sarewitz, earning him a Doctor of Philosophy degree. <https://keep.lib.asu.edu/items/161628>

Abstract:

This dissertation investigates how ideas of the right relationships among science, the public, and collective decision-making about science and technology come to be envisioned in constructions of public engagement. In particular, it explores how public engagement has come to be constructed in discourse around gene editing to better understand how it holds together with visions for good, democratic governance of those technologies and with what effects.

Using a conceptual idiom of the co-production of science and the social order, I investigate the mutual formation of scientific expertise, responsibility, and democracy through constructions of public engagement. I begin by tracing dominant historical narratives of contemporary public engagement as a continuation of public understanding of science's projects of social order for democratic society. I then analyze collections of prominent expert meetings, publications, discussions, and interventions about development, governance, and societal implications human heritable germline gene editing and gene drives that developed in tandem with commitments to public engagement around those technologies.

Synthesizing the evidence from across gene editing discourse, I offer a constructive critique of constructions of public engagement as expressions and evidence of scientific responsibility as ultimately reasserting and reinforcing of scientific experts' authority in gene editing decision-making, despite intentions for public engagement to extend decision-making participation and power to the public. Such constructions of public engagement go unrecognized in gene editing discourse and thereby subtly reinforce broader visions of scientific expertise as essential to good governance by underwriting the legitimacy and authority of scientific experts to act on behalf of public interests.

I further argue that the reinforcement of scientific expert authority in gene editing discourse through public engagement also centers scientific experts in a sociotechnical imaginary that I call "not for science alone." This sociotechnical imaginary envisions scientific experts as guardians and guarantors of good, democratic governance. I then propose possible alternatives to public engagement alone to improve gene editing governance by orienting discourse around notions of public accountability for potential shared benefits and collective harms of gene editing.